

## ESTIMATION OF PERMANENT AND NON-PERMANENT MILITARY RESIDENTS IN HAWAII

Equal representation – each member of a legislative body represents roughly equal populations.

For the Federal House of Representatives that population is the “resident population” as published by the U.S. Census Bureau as PL 94-171 census block counts for each state.

For the Hawaii State Senate and State House that population is the “permanent resident population” which has not been clearly defined.

### RESIDENT POPULATION

The U.S. Census Bureau defines the “resident population” of a state as the population for whom that state is their “usual residence”. There are many specific rules for special cases, but in essence, a person’s usual residence is where they live and sleep most of the time (or more than anywhere else, if time is divided among two or more places. Thus, certain populations who may be in Hawaii on Census Day (April 1, 2010), such as persons in transit, tourists, “snowbirds” and other short term visitors, are in most cases not considered residents and are not included in the Hawaii PL 94-171 resident population counts.

The Hawaii 2010 PL 94-171 resident population count is 1,360,301 persons. For the Federal House of Representatives, all of those residents receive representation. Given Hawaii’s two House districts, each district should contain roughly an equal number of residents (ideally 680,151) so that each legislator represents the same number of residents.

### NON-PERMANENT RESIDENT POPULATION

For the Hawaii State Senate and State House, not all residents may receive representation. The Hawaii Constitution specifies that only “permanent residents” shall receive representation, thus creating a potential subset of residents, “non-permanent residents”, who are not represented.

Who might these non-permanent resident populations be who do not receive representation? If you imagine a scale from zero to 100, where zero represents someone who has never been to Hawaii, and 100 represents someone who has lived here their entire life, then where might different populations fall along this scale?

Populations in transit are near zero on this scale. Visitors here for a few days or weeks are near zero as well, but not as near zero as the transit population. “Snowbirds” who stay for several months are a little further from zero, but in most cases still do not reach the Federal threshold to be considered a resident and are therefore not counted in Hawaii for the census.

As a general rule, any person whose usual residence is in Hawaii for more than anywhere else is considered a resident for purpose of the Census and is reported as such in the PL 94-171 census counts. Of those residents, which subset of residents might be considered “non-permanent” and therefore not receive representation in the State of Hawaii? Military personnel in group quarters, who may only live

here for a year or two, would seem less permanent than someone who had lived here their entire life. Military personnel who live on base may live here longer than those in group quarters, and may bring their families with them, so they would seem more a part of the community, but they would also seem less permanent than someone who had lived here their entire life. And military personnel (including their dependents) who live off base, who would seem even more a part of the community, but would still seem somewhat less permanent than someone that has lived in Hawaii their entire life.

#### MILITARY NON-PERMANENT RESIDENT POPULATION – “HOME STATE MODEL”

Every military sponsor must declare his or her “home state” for tax and other financial purposes. In the “Home State Model”, those who declare Hawaii as their “home state” are assumed to be “permanent residents” of Hawaii, and those who consider some other state as their “home state” are assumed to be “non-permanent residents” of Hawaii – assuming that their intent is to return to their “home state” at some point in the future.

The accuracy of this model depends on receiving detailed data from the Defense Manpower Data Center (DMDC) regarding the “home state” status and actual residence address on April 1, 2010 for all military sponsors whose duty station was in Hawaii on that date. The model assumes that a military sponsor’s dependents (spouse, children, parents) have the same “home state” status as their sponsor, so the accuracy of the model also depends on receiving specific residence address data for each dependent and their associated military sponsor.

#### MILITARY NON-PERMANENT RESIDENT POPULATION – “CENSUS MILITARY MODELS”

The 2011 Hawaii Reapportionment Commission has been unable to receive sufficiently detailed data from the DMDC to obtain accurate results from the “Home State Model”. However, there is an alternate model that could be used to estimate military non-permanent resident populations.

The U.S. Census provides block-level counts for military “group quarters”. These are often high-density, high-count blocks that can make a significant localized difference when redistricting. The U.S. Census also provides block-level counts for military on-base populations. These census blocks are generally spread out across the base and are not as high-count as the group quarters. Military sponsors and dependents who live off base are not counted separately by the U.S. Census. This information on military group quarters and military on-base populations can be used to create two models of military non-permanent residents in Hawaii (Census Military Models A and B – see below)

If all Hawaii military residents received representation then an adjustment to the PL 94-171 data would not be necessary. If some Hawaii military residents are assumed to be non-permanent, and therefore not be represented, the use of the census block-level military counts could provide a direct, simple way to estimate and subtract those non-permanent populations.

#### GROUP QUARTERS - "CENSUS MILITARY MODEL A"

As already mentioned, military sponsors in group quarters could be assumed the least permanent of the Hawaii military residents. If all of them were assumed to be non-permanent, they could easily be subtracted from the U.S. Census PL 94-171 data at the block level. This would result in a net subtraction of 12,551 persons from the PL 94-171 counts using "Census Military Model A".

#### GROUP QUARTERS AND ON-BASE RESIDENTS - "CENSUS MILITARY MODEL B"

If all military sponsors and all dependents living on-base were assumed to be non-permanent, they could also easily be subtracted from the U.S. Census PL 94-171 data at the block level. Combining the group quarters and on-base populations would result in a net subtraction of 70,123 persons from the PL 94-171 counts using "Census Military Model B".

#### DATA

No data is required from the DMDC to use these models. All required data is provided by the U.S. Census Bureau and does not require any "Zip code to census block" modeling since the data is provided at the block level.